Experimental Example 4

[0076] (Examination of Change Over Time in Aggregation Level of Nerve Cells)

[0077] The change over time in the aggregation level of each nerve cell cultured in the same manner as in Experimental Example 1 was observed. Evaluation criteria for the aggregation level were the same as those of Experimental Example 2.

[0078] FIG. **4** is a graph showing changes over time in the aggregation level of nerve cells obtained by replacing 250 μL, 150 μL, or 50 μL of a medium once three times a week. As a result, it was clarified that the nerve cells obtained by replacing 50 μL of a medium once three times a week maintained Aggregation Level 1 even on 56th day after the seeding the nerve cells.

[0079] On the other hand, it was recognized that the aggregation level of the nerve cells obtained by replacing 150 μL of a medium once three times a week increase after 38th day after seeding the nerve cells. In addition, it was recognized that the aggregation level of the nerve cells obtained by replacing 250 μL of a medium once three times a week increase after 31st day after seeding the nerve cells.

[0080] The results indicate that the lower the glucose concentration in the medium, the higher the aggregation level of the nerve cells tends to be. In the related art, a culture condition of nerve cells obtained by replacing 150 μL of a medium once three times a week is generally adopted. On the other hand, it was clarified that in a case of the culture condition of the nerve cells obtained by replacing 50 μL of a medium once three times a week, the aggregation level of the nerve cells can be maintained low.

Experimental Example 5

[0081] (Examination of Relationship Between Glucose Concentration in Medium and Aggregation Level of Nerve Cells)

[0082] In the same manner as in Experimental Example 1, nerve cells were cultured by varying the amount of medium replaced. Moreover, relationships between the glucose concentration of the nerve cells in the medium on 22nd day (DIV22) from the seeding of the nerve cells and aggregation levels of the nerve cells on the 31st day (DIV31), the 38th day (DIV38), the 45th day (DIV45), and 56th day (D1V56) from the seeding of the nerve cells were examined.

[0083] FIG. **5** is a graph showing examination results. In FIG. **5**, a horizontal axis shows the glucose concentration (g/L) of the nerve cells in the medium on DIV22, and a vertical axis shows the aggregation level of the nerve cells evaluated by the same evaluation criteria as in Experimental Example 2.

[0084] As a result, it was clarified that when the glucose concentration of the nerve cells in the medium on 22nd day (D1V22) from the seeding of the nerve cells is 1 g/L or higher, the aggregation levels of the nerve cells even on the 31st day (DIV31), the 38th day (D1V38), the 45th day (DIV45), and 56th day (DIV56) tended to be maintained low.

[0085] On the other hand, it was clarified that when the glucose concentration of the nerve cells in the medium on 22nd day (DIV22) from the seeding of the nerve cells is less than 1 g/L, the aggregation levels of the nerve cells on the 31st day (DIV31), the 38th day (DIV38), the 45th day (DIV45), and 56th day (DIV56) tended to hardly increase.

[0086] The present invention includes the following aspects.

[0087] [1] A cell-containing container including:

[0088] nerve cells; and

[0089] a medium,

[0090] in which the nerve cells adhere to a culture surface of the cell-containing container,

[0091] an adhesion area between the nerve cells and the culture surface is 0.5 mm^2 or more per 80,000 nerve cells, and

[0092] a concentration of glucose in the medium is 1 g/L or higher.

[0093] [2] The cell-containing container according to [1],

[0094] in which an electrode array is placed on the culture surface.

[0095] [3] The cell-containing container according to [1] or [2],

[0096] in which the nerve cells are derived from stem cells.

[0097] [4] The cell-containing container according to [3],

[0098] in which the stem cells are human cells.

[0099] [5] A method for producing a cell-containing container, the method including:

[0100] incubating a container including nerve cells and a medium, under a culture condition, while replacing the medium at a predetermined timing,

[0101] in which a concentration of glucose in the medium is maintained at 1 g/L or higher for a predetermined period.

[0102] [6] The production method according to [5],

[0103] in which the incubating is performed for 30 days or longer.

[0104] [7] The production method according to [5] or [6],

[0105] in which the nerve cells adhere to a culture surface of the cell-containing container, and

[0106] an adhesion area between the nerve cells and the culture surface is 3 mm^2 or more per 80,000 nerve cells.

[0107] [8] The production method according to [7],

[0108] in which an electrode array is placed on the culture surface.

[0109] [9] The production method according to any one of [5] to [8],

[0110] in which the nerve cell are derived from stem cells.

[0111] [10] The production method according to [9],

[0112] in which the stem cells are human cells.

[0113] While preferred embodiments of the invention have been described and illustrated above, it should be understood that these arc exemplary of the invention and are not to be considered as limiting. Additions, omissions, substitutions, and other modifications can be made without departing from the scope of the invention. Accordingly, the invention is not to be considered as being limited by the foregoing description and is only limited by the scope of the appended claims.

What is claimed is:

1. A cell-containing container comprising:

nerve cells; and

a medium,

wherein the nerve cells adhere to a culture surface of the cell-containing container,

an adhesion area between the nerve cells and the culture surface is 0 5 mm^2 or more per 80,000 nerve cells, and

a concentration of glucose in the medium is 1 g/L or higher.